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09/758,203	01/12/2001	Kazuaki Kinjyou	Q62634	8552

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SUGHRUE, MION, ZINN,  
MACPEAK & SEAS, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
WASHINGTON, DC 20037-3213

EXAMINER
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WILLIAMS, KEVIN D

ART UNIT	PAPER NUMBER
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/758,203  
Filing Date: January 12, 2001  
Appellant(s): KINJYOU, KAZUAKI

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Sughrue Mion  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed July 23, 2004.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 1-7 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (AAPA) in view of Sone (US 4,447,054).

With respect to claims 1-6, Applicant's admitted prior art teaches a recording apparatus comprising removing means (63; Fig. 2) for removing a recording medium from the medium fixing member, a thin film toner sheet 11, said recording medium being fixed to a medium fixing member such that an active surface of the recording medium is facing to the medium fixing member, the removing means having a removing claw 64, the removing claw having an upper face (Fig. 7b) that is operative to contact the recording medium, side faces (;Fig. 7a) respectively having a height reduced toward a tip (specification pgs. 1-10, figures 2, 3, 4, 5, 7).

With respect to claim 7, AAPA teaches a recording method comprising the steps of fixing an image receiving sheet onto the medium fixing member, said image receiving sheet having an image receiving layer to receive an image of a recorded image, fixing the toner sheet onto the image receiving sheet, and removing the toner sheet or the image sheet from the medium fixing member (specification pgs. 1-10, figures 2, 3, 4, 5, 7).

Applicant's admitted prior art does not teach portions joining the upper face and the side faces respectively being rounded and extending along the length of the side

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faces, a non-curvilinear portion being provided between the rounded portions, and the rounded portion having a radius of curvature of  $r=1$  mm or more and an upper face of the tip having a face pressure of 1 Kpa or less received from the recording medium being removed.

Sone teaches a recording apparatus with a removing claw 1 having portions joining the upper face (noted in Fig. 6b) and the side faces (noted in Fig. 6b) respectively being rounded and extending along the length of the side faces, a non-curvilinear portion being provided between the rounded portions (upper face; Fig. 6b).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify AAPA to have the rounded portions as taught by Sone, in order to prevent damage to the recording medium, the toner sheet, and the fixing member from a sharp edge of the removing claw.

It also would have been obvious to modify AAPA to have the rounded portion having a radius of curvature of  $r=1$  mm or more and an upper face of the tip having a face pressure of 1 Kpa or less received from the recording medium being removed, as it is obvious to modify a particular feature of a device to a specific degree according to the particular device and operation at hand. "Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." MPEP 2144.05 (II)(A). For example, since Sone teaches a radius of curvature, it would be obvious to modify that radius of curvature according to the overall size of the removing claw. Sone's recognition that the radius of curvature

and the contact surface area are result-effective variables is evidenced by his disclosure of embodiments that vary the radius of curvature and the contact surface area.

**(11) Response to Argument**

Applicant argues that the rejection of claim 1 is improper because there is no teaching or motivation to combine Sone with applicant's admitted prior art (AAPA). A proper rejection under 35 U.S.C. 103 combines references to produce the claimed invention only where there is some teaching, suggestion, or motivation to do so. The teaching, suggestion, or motivation must be found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. MPEP 2143.01.

Removing claws are used to peel sheets from printing drums and fixing drums. After printing or fixing, because of heat, pressure, and static energy, the sheet adheres to the drum. A removing claw, which is abutted against the drum, is used to peel the sheet from the drum. It is well known to those of ordinary skill in the art that care must be taken to prevent damage to the drum and the sheet. See the abstract and column 2, lines 61-65 of U.S. Patent 6,293,545 to Hanks. The newly cited Hanks reference has been cited to show the state of the art. Hanks discusses the detrimental effects sharp edges can have on a print sheet. Sharp edges on the claw can damage the print sheet by scraping the ink surface of the sheet. AAPA discloses a removing claw identical to the removing claw recited in claim 1, except that the invention recited in claim 1 provides rounded edges where the prior art device has sharp edges. The recognition by those skilled in the art of the detrimental effects that sharp edges of a removing claw

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can have on a sheet is evidenced by the Sone and Hanks references. Hanks solves the problem by eliminating sharp edges and replacing them with rounded edges. See column 2, lines 61-65. Sone also discloses a removing claw with several rounded edges. See figures 6a and 6b.

The motivation to combine Sone with AAPA is to prevent damage to the print sheet caused by a sharp edge of the removing claw. The knowledge that a sharp edge of a removing claw is detrimental to print sheets is generally available to those of ordinary skill in the art as evidenced by the Sone and Hanks references. Therefore, the rejection of claim 1 under 35 U.S.C 103 is proper, since the combination of AAPA and Sone is based upon a teaching, suggestion, or motivation found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

Applicant argues that the rounded portions of the removing claw in figure 6b of Sone do not touch the print sheet. Applicant argues that only the small arrow head portion of the claw touches the sheet. The Examiner disagrees. Such an argument assumes that once the leading edge of the sheet is lifted from the drum surface, the entire sheet simply falls away from the drum. As indicated by the title of Sone's invention, the sheet must be peeled away from the drum. In the embodiment of figure 2, the entire sheet is adhered to the drum 4. When the sheet is peeled away from the drum, a significant portion of the sheet rides over the bottom surface of the claw. Where the claw of figure 6b is used, the sheet will ride over the rounded portions of the claw.

Applicant argues that one of ordinary skill in the art presented with AAPA and Sone would not have rounded the sharp edges of AAPA, but instead would have modified AAPA to have the arrow head of Sone. The Examiner contends that whether or not one of ordinary skill would have been inclined to modify AAPA to have the arrow head of Sone is irrelevant in this case. The issue at hand rather, is whether there is proper motivation to combine the teachings of AAPA and Sone in the manner suggested by the rejection. The rejection modifies AAPA to have rounded edges, in view of Sone's teachings, in place of its sharp edges. The preceding paragraphs discuss the propriety of the motivation to modify AAPA in this manner.

Applicant argues that the rejection of claim 1 modifies AAPA to round the edges of the non-sloping top section (where the lead line of reference numeral 64 points in Fig. 7a) of the removing claw. The Examiner disagrees. The rejection modifies AAPA to round the edges of the sloping portions of the claw.

Those of ordinary skill in the art have recognized the problem that sharp edges of a removing claw pose to a print sheet. Sone teaches a removing claw for peeling a sheet from the surface of a drum. Sone rounds the edges of the claw preventing any sharp edges that could damage the sheet as it passes over the claw while being peeled from the drum surface. The rejection of claim 1 is based upon proper motivation since the motivation to combine Sone with AAPA is found in the references themselves and in the knowledge generally available to one of ordinary skill in the art.

With respect to claims 2 and 5, Applicant argues that a particular parameter must first be recognized as a result effective variable before the determination of the optimum



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or workable ranges of the variable might be characterized as routine experimentation.

Applicant further argues that the prior art does not recognize the radius of curvature and the face pressure as result-effective variables. Sone discloses several embodiments of the removing claw, including the removing claws disclosed in figures 1, 6a, and 6b. The removing claws disclosed in figures 6a and 6b each have rounded portions having different radii of curvature. The surface area of the claw that contacts the sheet in figure 6a is different from the surface area of the claw that contacts the sheet in figure 6b. The size of the contact surface area is directly proportional to the face pressure exerted on the claw by the sheet. Sone's recognition that the radius of curvature and the contact surface area are result-effective variables is evidenced by his disclosure of embodiments that vary the radius of curvature and the contact surface area. It is unlikely that Sone would disclose embodiments varying these variables if there were no advantages to be gained from the particular embodiments disclosed. Therefore, the prior art, namely Sone, does recognize the radius of curvature and the face pressure as result-effective variables.

For the above reasons, it is believed that the rejections should be sustained.


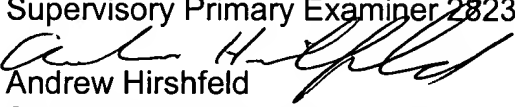
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Respectfully submitted,

KDW

October 18, 2004

Appeal Conference Date: September 30, 2004

Conferees: Olik Chaudhuri   
Supervisory Primary Examiner 2823  
  
Andrew Hirshfeld  
Supervisory Primary Examiner 2854

Kevin D. Williams  
Examiner 2854

SUGHRUE, MION, ZINN,  
MACPEAK & SEAS, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
WASHINGTON, DC 20037-3213